REMARKS

It is noted that dependent Claim 12 is finally rejected under 35 USC § 112, second paragraph, as being indefinite for failing to provide a positive structural limitation within an apparatus claim. Dependent Claim 12 is now amended to provide the required positive structural limitation. It is respectively requested that this amendment be entered for, at least, placing this application in better condition for appeal.

It is further noted that (1) independent Claim 1, as previously amended, together with Claims 2-10 and 17 dependent thereon, have been finally rejected under 35 USC § 102(b) as being anticipated by Kasevich et al. (US 5057 106) and (2) Claims 11-16, also dependent on independent Claim 1, have been finally rejected under 35 USC § 103(a) as being unpatentable over Kasevich et al. further in view of Sterzer et al. (US 5688050).

The clause of amended independent Claim 1 which defines the physical structure of the antenna states, "said antenna is longitudinally physically situated in cooperative relationship with said exterior surface of said balloon, thereby in use causing said inflated balloon pressing said diseased tissue to result in said antenna being in direct contact with irradiated tissue of said patient."

In the final rejection of 01/13/05, the Examiner relied on Kasevich et al. FIGURE 4 and Col. 5 line 37 as reading on the aforesaid clause of amended independent Claim 1. However, a legend included as part of Kasevich et al. FIGURE 4 states, " CAA EMBEDD IN BALLOON SKIN," which is inconsistent with the physical situation of the antenna defined in the aforesaid clause of amended independent Claim 1. To resolve this inconsistency, telephone interviews took place between applicants' attorney and the Examiner on 01/25/05 and 01/31/05, which resulted in the Examiner agreeing that neither FIGURE 4 (described in Col 8, lines 11-14) nor any other figure of Kasevich et al. shows an antenna having the physical structure defined in the aforesaid clause of amended independent Claim 1. However, it is the Examiner's current position that the teaching of Kasevich et al. defined in the single sentence (Col 5, lines 33-37), "In accordance with one embodiment of the invention, a printed microstrip circuit radiator or antenna pattern is configured in one of several ways, such as inside the balloon, between the balloon surfaces or outside the balloon." by itself meets

(can be read on) the specific physical structure defined in the aforesaid clause of amended independent Claim 1.

It is applicants' position that the Examiner has taken this single sentence out of context and that the teaching of the Kasevich et al. disclosure, taken as a whole, not only does not teach the physical structure defined in the aforesaid clause of amended independent Claim 1, but teaches away from this physical structure. More specifically, a fair reading of the Kasevich et al. specification and claims indicates that their invention is limited to a balloon angioplasty procedure that employs a microwave catheter system for heating (or, in some cases melting) arterial plaque within an artery vessel without heating the underlying vessel tissue itself. Applicants' position is supported by the following:

First, the entire paragraph (Col 5,lines 27-37), of which above-quoted Col 5, lines 33-37 is part, states, "In accordance with the present invention, there are now described a number of techniques for providing control of the quantity of microwave energy that is coupled to coronary vessel plaque without heating vessel tissue. A collinear array is provided inside the balloon or between two balloon surfaces (balloon inside a balloon). In accordance with one embodiment of the invention, a printed microstrip circuit radiator or antenna pattern is configured in one of several ways, such as inside the balloon, between the balloon surfaces or outside the balloon (underlining added). In accordance with one embodiment of the invention, a printed microstrip circuit radiator or antenna pattern is configured in one of several ways, such as inside the balloon, between the balloon surfaces or outside the balloon. (underlining added)"

Second, the. Col 5, lines 38-45 paragraph (which immediately follows the above-quoted Col 5, lines 27-37 paragraph) states, "In accordance with another embodiment of the invention, the antenna may be formed from a guide wire . In another embodiment of the invention, a collinear array may be provided inside the balloon and the balloon may be fabricated with either a magnetic or a dielectric lossy coating on its surface or the balloon itself may be loaded with a similar lossy material so as to provide direct balloon heating (underlining added)." In this regard, see FIGURES 16 and 17 (described in Col 10, lines 35-45)

Third, the Kasevich et al. disclosure, discloses a large number of different antenna configurations (FIGURES 3-14) or use with a balloon

catheter. Of these only the antennas shown in FIGURES 11 and 14 are physically situated outside of the balloon. Neither the FIGURE 11 nor the FIGURE 14 antenna configuration is "physically situated in cooperative relationship with said exterior surface of said balloon, thereby in use causing said inflated balloon pressing said diseased tissue to result in said antenna being in direct contact with irradiated tissue of said patient", as called for in amended Claim 1. FIGURE 14 is fully described in Col 6, lines 3-34. In particular, Col 6, lines 8-16 state, "The primary function of this hot tip (when the ferrite is at the far end of the antenna) is to melt plaque (ablation). This is used for those cases where the artery is fully blocked by plaque, and it would therefore be necessary to remove some plaque in order to insert the balloon. In FIG. 14, note the plaque volume at V. Once some plaque has been removed, the balloon may be inflated and the microwave angioplasty carried out."

In view of all of the foregoing discussion, it is submitted that the Examiner's attempt to read the Kasevich et al. broad language "outside the balloon (Col 5, line 37)" on the amended Claim 1 narrow language "said antenna is longitudinally physically situated in cooperative relationship with said exterior surface of said balloon, thereby in use causing said inflated balloon pressing said diseased tissue to result in said antenna being in direct contact with irradiated tissue of said patient.", must have been made in the light of applicants' disclosure (which is improper) because there is nothing in the disclosure of Kasevich et al. that suggests physical structure defined by this narrow language of amended Claim 1 and, further, Kasevich et al. teaches away from the invention defined by amended Claim 1.

For all of the reasons set forth above, amended independent Claim 1 is submitted to be allowable.

Each of Claims 2-17, dependent on parent amended independent Claim 1, is considered allowable for at least the same reasons as amended independent Claim 1.

It is believed that this application is now in condition for allowance and such action is solicited.

Respectfully submitted,

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